

Remarks

Reconsideration and allowance of this application, as amended, are respectfully requested.

Applicant acknowledges with gratitude the personal interview conducted with the examiner and the supervisory examiner on February 9, 2009. During the interview Applicant first summarized the instant invention and urged the patentability thereof over U.S. Patent No. 4,136,982 to Sagady. In explaining the differences between Sagady's centering spring 52 and Applicant's claimed locking ring, Applicant referred to Sagady's Figure 5 and Applicant's Figure 1. The supervisory examiner acknowledged that Sagady's centering spring has a different shape than Applicant's locking ring.

In the present Amendment, independent claims 1 and 10 have been amended as discussed generally during the interview to further define the structure of the locking ring. New claims 12-14 have been added. Claims 5 and 6 were previously canceled. Claims 1-4 and 7-14 are now pending in the application. Claims 1, 10, and 12 are independent. The rejections are respectfully submitted to be obviated in view of the amendments and remarks presented herein. No new matter has been introduced through the foregoing amendments.

Claim 1 has been amended to clarify that "the opening in the locking ring [is] disposed between the opposed free end areas." Claim 10 has been amended to clarify that "the opening [is] located at a periphery of the locking ring and [is] disposed between the

opposed free ends of the locking ring." Support for each of the instant recitations is found in original claim 1, at specification page 5, lines 4-6, and in, for example, drawing Figures 1 and 3b.

New claims 12-14 have been added to further define the scope of protection sought for Applicant's invention. Claim 12 defines the locking ring element by reciting that "the opening between the opposed free end areas is located at a periphery of the locking ring." Support for claim 12 is also found at specification page 5, lines 4-6, and in drawing Figures 1 and 3b. Claims 13 and 14 have been added in response to a suggestion made by the supervisory examiner during the interview.

Entry of each of the amendments is respectfully requested.

35 U.S.C. § 102(b) - Sagady

Claims 1-4 and 7-11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,136,982 to Sagady. The examiner relies upon Sagady's Figure 5 and asserts that Sagady's centering ring has "opposed free end areas (52 [sic, 62], 68) that adjoin the locking ring (20) opening (figure 5)" and that engage the inner groove of the ring part.

The rejection of claims 1-4 and 7-11 under § 102(b) based on Sagady is respectfully deemed to be obviated. The disclosure of Sagady does not anticipate Applicant's presently claimed invention.

Claims 1-4 and 7-11 are allowable for at least all of the reasons articulated in Applicant's reply filed August 14, 2008.

Furthermore, as indicated above in the introductory remarks, claim 1 has been amended to clarify that "the opening in the locking ring [is] disposed between the opposed free end areas." Sagady's "Centered Fastener Assembly" is structurally and functionally different in several respects from Applicant's presently claimed invention. For one, as is abundantly clear from Sagady's Figures 5 and 6, Sagady does not disclose a locking ring that even *has* an *opening* or gap therein, let alone Applicant's claimed feature of "the opening in the locking ring being disposed between the opposed free end areas." Instead, Sagady discloses a centering spring 52 having end areas 62, 68 that *overlap, abut each other, and are bent inwardly* toward the centered shaft. That is not Applicant's presently claimed invention.

Since Sagady does not meet each feature of the claimed invention, Sagady does not anticipate the invention defined by Applicant's instant claim 1. Claims 2-4 and 7-9 are allowable because they depend from claim 1, and for the subject matter recited therein.

Independent claim 10 is similarly allowable. Instant claim 10 recites that "the opening [is] located at a *periphery* of the locking ring and [is] disposed between the opposed free ends of the locking ring." Sagady has no opening between opposed free ends, let alone an opening located at a *periphery* of his spring.

Claim 11 is allowable because it depends from claim 10, and for the subject matter recited therein.

New claims 12-14 have been added to further define the scope of protection sought for Applicant's invention. Claim 12 defines the locking ring element by reciting that "the opening between the opposed free end areas is located at a *periphery of the locking ring*." Sagady neither anticipates nor would have rendered obvious the locking ring defined by claim 12. As indicated above, Sagady teaches a centering spring 52 with ends 62 and 68. As is evident from Sagady's Figure 5, the ends 62 and 68 are located *inside* the periphery of spring 52, and in fact, are located so far inside that they contact the *periphery of the centered shaft 54*.

Claims 13 and 14 have been added in response to a suggestion made by the supervisory examiner during the interview. Independent claim 13 defines an embodiment of the invention that is a locking ring assembly for axially securing an inserted shaft having a peripheral groove.

New claims 13 and 14 are also allowable. Applicant's claimed assembly includes, *inter alia*, "an annular ring having an inner groove therein" and "a locking ring." The locking ring element includes "a plurality of *first partial areas configured to engage the inner groove of the annular ring*" (claim 13). In addition, "the locking ring [is] configured as a polygon that includes side parts, corner areas, and *opposed ends at an opening*

therein, the first partial areas including the corner areas and the opposed ends" (claim 13). See Applicant's Figures 1-6. It is clear from Figure 1 alone that the "opposed ends at an opening therein" (i.e., "opposite free ends 57 and 56" per specification page 5, first paragraph, which are, as defined, one of the "first partial areas") each "engage the inner groove [21] of the annular ring."

Per claim 13, the "locking ring [is] resiliently deformable such that upon being resiliently pressed together, pushed into *the inner groove*, and released so as to expand, *the locking ring is placeable in the inner groove*" of the annular ring (see Applicant's Figures 1, 3a, 3b, and 6). And, "the locking ring is slideable on a periphery of the shaft until the locking ring is located at the peripheral groove, and to resiliently snap into the peripheral groove *to secure the shaft to the annular ring*" (claim 13) (see Applicant's Figures 4a, 4b, and 5).

A beneficial feature of the present invention is that the corner areas of the locking ring and the opposed free end areas that adjoin the opening in the locking ring *engage in the inner groove* of the surrounding ring part when the shaft part is inserted.

Sagady neither anticipates nor would have rendered obvious the locking ring assembly as defined by either of claims 13 and 14. In describing Figures 5 and 6, Sagady teaches that "[a]s

in the first embodiment, this spring is adapted to surround a shaft 54 and fit within a radial annular retainer groove 56 which corresponds to the groove 14 of the first embodiment" (column 3, lines 17-22). See also Sagady's disclosure regarding the aforementioned first embodiment, i.e., "[g]roove 14 has a round wire snap ring 20 generally C-shaped in side view disposed therein" (column 2, lines 35-37).

With regard to the ends of centering spring 54, Sagady explicitly teaches a centering spring with ends (i.e., "peripheral points" 62 and 68) that are supported on the shaft 54 (see Sagady Figure 5), not on the surrounding annular ring per Applicant's claimed invention. Even more explicitly, Sagady discloses that "[a]s in the previous embodiment, the spring makes a point contact at a number of arcuately spaced peripheral points 62, 64, 66 and 68 with the bottom wall of slot or groove 56" (column 3, lines 27-30).

That certainly is not Applicant's claimed invention, in which the opposed ends 56 and 57 of the locking ring 5 engage the annular inner groove 21 of the annular ring 1.

In view of the foregoing, this application is now in condition for allowance. If the examiner believes that another

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interview might expedite prosecution, the examiner is invited to
contact the undersigned.

Respectfully submitted,

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